

DOCUMENT RESUME

ED 089 005

CE 001 043

AUTHOR Calhoun, Olivia H.
TITLE Communications and Media: Grade 7. Cluster II.
INSTITUTION District of Columbia Public Schools, Washington, D.C.
Dept. of Career Development.; Metropolitan Educational Council for Staff Development, Washington, D.C.
SPONS AGENCY Bureau of Adult, Vocational, and Technical Education (DHEW/OE), Washington, D.C.
PUB DATE Sep 72
NOTE 91p.; For the Washington, D.C., Career Development Exemplary Project itself see CE 000 906
EDRS PRICE MF-\$0.75 HC-\$4.20 PLUS POSTAGE
DESCRIPTORS *Career Education; *Communications; Curriculum Guides; Films; *Grade 7; Journalism; Libraries; *Mass Media; Occupational Clusters; Photography; Publicize; Publishing Industry; Radio; Telecommunication; Television; *Units of Study (Subject Fields)
IDENTIFIERS *Career Development; District of Columbia

ABSTRACT

A curriculum guide for grade 7, the document is devoted to the occupational cluster "Communications and Media." It is divided into six units: advertising, film and photography, radio and television, journalism and publishing, library and periodicals, and transocean communications. Each unit is introduced by a statement of the topic, the unit's purpose, main ideas, guests, and a list of career opportunities (positions) available in that area. Next, the areas of language arts, mathematics, science, social studies, home economics, industrial arts, music, and physical education (when applicable) are subdivided into purpose, objectives, activities, materials, and notes with a statement relating these categories to the unit topic. The document is one of ten curriculum guides at the seventh and eighth grade levels presenting a career education emphasis. The teacher's manual for the series is available as CE 001 041. The other guides are: consumer and homemaking (CE 001 042), fine arts and humanities (CE 001 044); construction and environment (CE 001 045); agri-business, natural resources, marine science (CE 001 046); public service occupations (CE 001 047); health occupations (CE 001 048); manufacturing, marketing and distribution, business and office occupations (CE 001 049); transportation (CE 001 050); and hospitality, recreation and personal service occupations (CE 001 051). (AG)

COMMUNICATIONS AND MEDIA

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA
Presidential Building
415 Twelfth Street, N.W.
Washington, D.C. 20004

CAREER DEVELOPMENT EXEMPLARY PROJECT

An
Interdisciplinary
Course of Study
for
Grades Seven and Eight

Public Schools of the District of Columbia
Hugh J. Scott, Superintendent
James T. Guines, Associate Superintendent
for Instructional Services
Mrs. Bessie D. Etheridge, Director
Career Development Exemplary Project (K-12)
Mrs. Ellen F. Datcher, Assistant Director
for Junior High Schools
Paul E. Cawein, State Director
for Vocational Education

These materials were designed and tested under the provisions of
Part D of Public Law 90-576 of the Vocational Education Amendments
of 1968.

September 1972

CAREER DEVELOPMENT EXEMPLARY PROJECT

Curriculum Guides Prepared by
THE METROPOLITAN EDUCATIONAL COUNCIL FOR STAFF DEVELOPMENT

Curriculum Writer/Editor: Olivia H. Calhoun
Executive Director: Elaine C. Melmed

MEMBER INSTITUTIONS

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A C K N O W L E D G E M E N T S

The Career Development Curriculum Guide was developed cooperative by the following persons:

Olivia H. Calhoun.	Curriculum Writer
Joyce C. Page.	Assistant Curriculum Writer
George Galloway.	Principal, Evans Junior High School
Marguerite J. Pettigrew.	Principal, Browne Junior High School

CONSULTANTS

Donald H. Bullock, Ph.D.	Technical Writer	Catholic University
Effie B. Crockett	Home Economics	Howard University
Rose Ann W. Elliott	Art	Browne Junior High School
Barbara Gregory	Home Economics	Federal City College
Louise C. Iannone	Guidance	The American University
Peter J. McCarthy	Music	Trinity College
Edna W. McClellan	Social Studies	University of Maryland
Martha Mead	Business Education	University of Maryland
Mary C. Rodgers, Ph.D.	Language Arts	D. C. Teachers College
Laura Smith	Instructional Specialist	Federal City College
Howard S. White	Science	McKinley High School
Lynwood F. Williamson	Industrial Arts	Browne Junior High School
Walter M. Young	Mathematics	Federal City College

TEACHERS

BROWNE

Annie U. Beard
Elizabeth S. Childs
Rose Ann W. Elliott
Zelmar S. Gordon
Nancy I. Harris
Lillian H. Jones
Roger B. Kyles
Nell M. LaBeach
David A. Lyons
Donald R. Moore
Evangeline S. Moore
Elnora Oxendine
Joseph M. Stills
Lynwood F. Williamson

EVANS

David J. Briles
Izzetta C. Callahan
Geraldine Cooke
Faye M. Dixon
Margaret J. Fenner
Modestine Gaynor
Edna V. Holliday
Jewyll Holliday
Marilyn Levitt
Harold B. Plummer
Harriet L. Richardson
James W. Vaughn

GRADE 7

CAREER CLUSTER MODULE

II

COMMUNICATIONS AND MEDIA

UNITS/TOPICS

- | | |
|-------------------------|------------------------------|
| 1. Advertising | 4. Journalism and Publishing |
| 2. Film and Photography | 5. Library and Periodicals |
| 3. Radio and Television | 6. Transocean Communications |

7 - 11 - 112

Grade level; 11 = Cluster Number; and, 112 = page number.

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Career Development Curriculum Guide: Grade 7
CLUSTER/MODULE: COMMUNICATIONS AND MEDIA

PURPOSE: Some of the broad purposes here are to:

1. Inform the student of the fields of employment related to Communications and Media.
2. Discuss how technology constantly improves communications and media.
3. Show how communications moves from the local to the national level.
4. Show how media effects our lives daily.
5. Show how communications and media has changed the entire structure of the American society.

SYNOPSIS: This entire cluster/module will be studied through the following topics:

1. Advertising
2. Radio and Television
3. Film and Photography
4. Journalism and Publishing
5. Library and Periodicals
6. Transocean Communications

HIGH IMPACT ACTIVITIES: (taken from those suggested under each topic)

1. Tour of McArdle Printing Company
2. Tour of Washington Post or Washington Star
3. Tour of WOOK or WOL (radio stations)
4. Students take and develop their own pictures
5. Local universities come and demonstrate the art of photography
6. Representatives from Washington Technical Institute come in and demonstrate how to make films.
7. Tour of Twining School Media Center
8. Tour of Channel 26 TV Station (WETA)
9. Local disc jockey visit school and present a short version of a radio program in its entirety
10. Tour of Judd and Detweiler Printing Plant
11. Tour of Government Printing Office
12. Publish Minischool paper
13. Tour of school printing plant in the process of publishing something
14. Tour of Congressional Library

Career Development Curriculum Guide: Grade 7
CLUSTER/MODULE: COMMUNICATIONS AND MEDIA

HIGH IMPACT ACTIVITIES -- Continued

15. Visit to school library
16. Students make cartmobile library for Minischool
17. Speaker from COMSAT
18. Speaker from Voice of America, Radio Free Europe, Western Electric, and C&P Telephone Company
19. Visit Goddard Space Center

COMMON RESOURCES:

1. Washington Technical Institute
2. Twining School Media Center
3. "Photography" (magazine)
4. WOOK and WOL radio stations
5. Channel 26 (WETA)
6. Library of Congress
7. Government Printing Office
8. Judd and Detweiler Printing Company
9. Goddard Space Center
10. Western Electric
11. Voice of America
12. C&P Telephone Company
13. COMSAT
14. KODAK Company
15. Fine Arts Departments of local universities
16. Washington Post and Washington Evening Star
17. All area libraries

CLUSTER 2 - Grade 7

COMMUNICATIONS AND MEDIA

Unit/Topic 1 - Advertising

Career Development Curriculum Guide: Grade 7
CLUSTER/MODULE: COMMUNICATIONS AND MEDIA

Topic: Advertising

Purpose:

- To provide the student with an understanding of the impact of advertising on him and on his family.
- To familiarize the student with the various techniques used to design and produce advertisements.
- To inform the student about career opportunities related to advertising.

Main Idea: Our main idea is to have the student become aware of the direct effect that advertising has on him and his buying practices.

Quest: Student(s) design, write, layout ad for ad sheet in newspaper.

Career Opportunities: Actor, actress, addressograph machine operator, advertising audio-visual director, advertising clerk, advertising copywriter, advertising manager, advertising media buyer, advertising salesperson, art director, bank customer service personnel, book designer, book editor, business forms analyst, buyer, copyreader, home demonstration agent, hotel manager, litho-artist, litho-platemaker, lithography proofer, paste makeup person, photographer, printing cameraman, printing plant superintendent, printing pressman, printing salesperson, radio and television announcer, radio and television broadcast producer-director, radio and television broadcast technician, rewrite person.

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising

LANGUAGE ARTS

Purpose: To show how writing skills play an important role in advertising.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Name occupations related to mass media, - particularly to advertising.
2. Distinguish between several different kinds of propaganda techniques used on the public consumer.
3. Describe the interrelationships of mass media communications.
4. Pronounce and spell technical terms related to careers in advertising.
5. Perform adequately in group situations.
6. State some of the effects of advertising on the economic system.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Students will make a vocabulary list of words used in advertising.
2. Students will make a chart showing differences in words used in different media--television, radio, magazines, and newspapers.
3. Students will carry out research and present a one-minute talk on careers in advertising using first person focus.
4. Students will conduct a panel discussion analyzing a television commercial.
5. Students will view the film "Are You Listening?" (Prince Georges Library Film), and discuss salient points.

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising, LANGUAGE ARTS

Activities -- Continued

6. Students will write several newspaper advertisements for the Minischool newspaper.

7. Students will research the terms:

microphone
frequency
videotape
blocking
galleys
closeup
zoom lens
monitor

pulp
hyperbole
soft soap technique
band wagon appeal
re-run
one-minute spot
electronic head

and list the advertising medium(s) to which each is related.

Materials:

1. Newspapers
2. Magazines
3. Dictionaries

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising

MATHEMATICS

Purpose:

To increase students' understanding of advertising as a necessary means of support for maintaining the programs of the communications media.

To expose the students to the utilizations of mathematics in the field of advertising.

To show how advertising and advertisements use arithmetic and geometry as they are interrelated.

Objectives:

Upon completion of work in this unit, the student should be able to:

1. Add numbers up to and including five addends of three digits each, with regrouping when necessary and up to and including three addends of two digits each, with regrouping when necessary.
2. Multiply numbers up to and including a four-digit by a three-digit number occasionally using zero as a digit in the multiplier.
3. Add and multiply common fractions.
4. Convert common fractions to decimal form and the converse.
5. Add and multiply decimals.
6. Identify and illustrate in a plane, a line, a line segment, and a ray.
7. Measure the length of a line segment using a defined but non-standard unit of length and also using English units to the nearest eighth of an inch.
8. Find the area of plane figures: squares, rectangles.
9. Add and subtract measures (denominate numbers) including exercises which require conversion of related units.
10. Read the thermometer.

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising, MATHEMATICS

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Have students plan a radio program of a half-hour with advertisements built in. Have the students calculate how many recordings they will play during that time span, and how much time will be devoted to advertisements.
2. Have students measure the lengths and widths of objects on various pages of an advertisement in newspapers and magazines.
3. Have students determine whether several advertisements of specified areas can be put on a single page, if the size of the page is known.
4. Have students calculate the number of minutes in one hour that are devoted to advertising on some standard television programs.
5. Quest: Have students collect data concerning the cost of advertising in the general newspaper, want ads, magazines, TV, and radio.
6. Quest: Have students calculate the cost to a given student for running an ad in the Washington Post, a magazine, and/or buying TV and radio time for making public announcements.
7. Quest: Have students determine the revenue to their school from advertisements in the school newspaper.
8. Given layouts of several fairly large advertisements, and the need to print each in a smaller, specified area, have student calculate the reduction ratio, e.g., 25%, 50%, required to achieve the fit. Tie-in with Science, photographic reduction.

Materials:

1. Graphic arts material
2. Data on pricing newspaper ads
3. Price of TV and radio time
4. Lists of costs for magazine advertisements

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising, MATHEMATICS

Notes:

Tie-Ins with Other Subject Areas:

Graphic Arts
Journalism
Commercial Art

SCIENCE

Purpose:

To show the student the role that the camera plays in the field of advertising. Note: The work in this unit includes coverage of film and photography.

Objectives:

Upon completion of work in this unit, the student should be able to:

1. Use, at a minimum level of competence, the family's and/or his own camera.
2. Use vocabulary related to photography both in oral and written modes.
3. Apply skills learned in mathematics to photography.
4. Apply basic artistic skills in picture composition.
5. State several career fields in photography.
6. Describe several scenes and subjects critically and with a discerning eye.

Activities:

To accomplish the objectives, the student may engage in activities such as:

1. Students and teacher will examine several types of commercially available cameras, including a Polaroid and a 35 mm. camera. (Teacher should explain f-stop, ASA number, focus, shutter)
2. Students will make a simple box camera.
3. Students will take visual sightings with constructed pinhole cameras.
4. Students will make and develop blueprints. Tie-in with Industrial Arts.
5. Students will experiment with light energy and resulting chemical change and write up results of experiment.
6. Students will research the behavior of molecules and ions during chemical change, and write report summarizing findings.

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising, SCIENCE

Activities -- Continued

7. Students will take outdoor photographs using simple cameras to illustrate an advertisement. Tie-in with Art, Language Arts.
8. Students should research items needed for darkroom, e.g., fixative, stop bath, etc.
9. Students will develop film in a darkroom.
10. Students will print negatives.

Materials:

1. Kodak Brownie box camera
2. Chart of simple camera
3. Shoe box
4. Chalk boxes
5. Glue
6. Aluminum foil
7. Straight pins
8. Waxed paper
9. Thin cardboard
10. Meter sticks
11. Black cloth or plastic sheets
12. Notebooks
13. Paper, rulers, pencils
14. 25-foot cloth tape on reel
15. Sun-faded cloth
16. Blueprint paper
17. Black and white negatives
18. Color negatives
19. Lab pans or 8" x 11" cake pans
20. Hydrogen peroxide
21. Timing device
22. Glass exposure frames and masks
23. Thermometer
24. Red light
25. Drying line
26. Clothes pins

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising

SOCIAL STUDIES

Purpose:

To explore occupational opportunities associated with advertising and to broaden the student's concept of advertising as a major force in our free enterprise system.

Objectives:

Upon completion of work in this unit, the student should be able to:

1. Critically analyze the importance of advertising in a free enterprise system.
2. Examine and describe several of the many forms of advertising.
3. List several statements evaluating advertising as a business, its risks and rewards.
4. Identify and discuss false and misleading advertising.
5. State a relationship between geography and effective advertising media.
6. State several of the job opportunities which are made available through this industry.

Activities:

To accomplish the objectives, the student may engage in activities such as:

1. Have students select two advertisements dealing with similar products and write a paragraph or two comparing them as to how each tries to
 - a. attract attention
 - b. develop interest
 - c. create desire
 - d. produce action

Tie-in with Language Arts.

2. Have students find and discuss advertisements that provoke a reaction (positive or negative) from the following categories of the population:
 - a. young mothers
 - b. retired couples
 - c. brides-to-be

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising, SOCIAL STUDIES

Activities -- Continued

- d. small children
- e. racial, ethnic, or religious groups or individuals
- f. teenagers
- g. young adults (male and female)
- h. everybody

Tie-in with Science, Mathematics, (e.g., research into motivation, demography)

- 3. Have students find examples of deliberately misleading or false advertising, and write a paragraph explaining the misleading or false aspect. Tie-in with Language Arts.

- 4. Have students work in pairs or groups to make a scrapbook of selected pictures of places in the United States whose geographical features are advertising assets. Also, have them write a brief caption for each selection explaining the reasons for inclusion.

- 5. Have students research and report on how advertising has influenced the growth and development of the United States. Find the most populated areas of the United States and attempt to relate the population growth to non-commercial or commercial advertising.

- a. Note the role of advertising in the settlement of the West.
- b. Check advertising by the Union Pacific railroads attracting settlers to the West.

- 6. Have students give an oral report examining the geographical assets and liabilities of the state of Nevada and describing how it compensates for its liabilities through the advertising of its assets.

- 7. Have students research the following expressions; relate each to the field of advertising.

caveat emptor
FCC
consumers research
Bureau of Standards

Madison Avenue
seals of acceptance
Better Business Bureau
Consumers Union

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising, SOCIAL STUDIES

Activities -- Continued

consumer	billboards
commercials	standard brand
"bait" advertising	producer

Materials:

1. Magazines (selected by teacher and students)
2. Newspapers
3. Films to be selected by teacher (See Common Resources in introduction to topic)
4. D. C. Telephone Book (yellow pages)
5. New York Telephone Book (yellow pages)
6. Turner Livingston Service, Columbia University Text Workbook, the newspaper you read, etc.
7. Be Informed Units, New Readers Press Division of Lanbich Literacy, Inc., 1970-71.
 - a. "Personal Credit"
 - b. "Buying an Automobile"
 - c. "Owning an Automobile"
 - d. "Buying a House"
 - e. "Personal Insurance"
 - f. "Renting a House"
 - g. "Finding a Job"
 - h. "Reading Your Newspaper"
 - i. "Taxes"

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising

HOME ECONOMICS

- Purpose:
- To show how design and color are related to the field of advertising.
 - To help students to create and to experience the joy of creating a thing of beauty.
 - To prepare students to choose from an array of promising, interesting, and personally rewarding careers.
- Objectives:
- Upon completion of work in this unit, the student should be able to:
1. State some principles of good design and to apply these principles to evaluate advertisements and to choose or reject consumer goods.
 2. State some of the principles of good design that are useful in the field of advertising.
- Activities:
- To accomplish the objectives, the students may engage in activities such as:
1. Have students study in textbooks (See Materials below) the principles of art and how it enables one to use clothing and grooming to enhance oneself, and begin making a dictionary of words used in this unit. Tie-in with Language Arts.
 2. Have students define the words that make up principles of design (balance, proportion, and rhythm). Tie-in with Language Arts.
 3. Have students examine fabric design, pottery, clothes, flower arrangements, and lace to see how visual rhythm has been achieved through repetition in line and in color, and then to construct an example, using crayons or water colors. Tie-in with Music.
 4. Have students observe a demonstration illustrating how optical illusions can be created through the selection of different lines and shapes, and to construct an example of one optical illusion.

Activities -- Continued

5. Have students collect and analyze advertisements representing the different kinds of lines.
6. Have students experiment with colors by having them use water paints or crayons to make primary and secondary colors.
7. Have students assemble a collection of colors: fruits, vegetables, clothes, flowers, etc. and experiment with combining colors for a pleasing visual experience.
8. Have students view film strips: "Take a Look at Color," "Color and You," and "Color as You Hear It," (All found in the District Schools Film Catalogue) and discuss principles stated in the films.
9. Have students observe a demonstration showing how to plan a theme around a primary color and to bring in at least one example of an advertisement built around a primary color.
10. Have class discuss how color and line can be used to make a thin item seem larger, a large item look smaller, a tall person appear shorter, and a short person appear taller.
11. Have students examine some newspaper or magazine advertisements and list both the deceptive and non-deceptive art principles that have been incorporated into the ad.

Materials:

1. Books:
 - a. Fleck, Fernandez & Munves. Exploring Home and Family Living. Prentice Hall, 1969.
 - b. Bennett, Charles. Art for Young America.
 - c. Teen Guide to Homemaking. McGraw Hill Company.
 - d. Jarret, James L. The Quest for Beauty. Prentice Hall.
 - e. How You Look and Dress. McGraw-Hill Company.
2. Color wheel
3. Water paint
4. Crayons

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising, HOME ECONOMICS

Materials -- Continued

5. Construction paper (See Activity 5)
6. Films (See Activity 8)
7. Collections of colors (See Activities 6, 9)

Career Development Curriculum Guide: Grade 7
Communications and Media, Advertising

INDUSTRIAL ARTS

Purpose: Show the students the importance of some basic
woodwork skills in the field of advertisement.

Objectives: Upon completion of work in this unit, the student
should be able to:

1. Make layouts.
2. Measure wood correctly.
3. Use hand and power tools correctly and safely.
4. Make paste-ups.
5. Joint ends.

Activities: To accomplish the objectives, the student may engage
in activities such as:

1. Make scrapbook of ads in students' career choice.
2. Carry out an analysis of technique and message
on television and radio. Tie-in with Language
Arts.
3. Build display bulletin boards.
4. Make paste-up of want ads related to their
career choice.
5. Make frames for special ads on display. Tie-in
with Mathematics.
6. Lay out and design job (pattern).

Materials:

- | | |
|--------------------|--|
| 1. Wood | 7. <u>Clamps</u> |
| 2. Nails | 8. <u>Vise</u> |
| 3. Glue | 9. <u>Saw</u> (power, hand) |
| 4. 2 H pencils | 10. Pine and oak wood. |
| 5. Drawing Board | 11. Varnish or stain for wood
frames. |
| 6. <u>T-Square</u> | |

CLUSTER 2 - Grade 7

COMMUNICATIONS AND MEDIA

Unit/Topic 2 - Film and Photography

Career Development Curriculum Guide: Grade 7
CLUSTER/MODULE: COMMUNICATIONS AND MEDIA

Topic: Film and Photography

Purpose: To develop the students' concept of photography as a career which incorporates both the aesthetic and the technical.

Film-making and photography are highly important as skilled careers on the world scene. They are a billion-dollar industry annually.

The students will see that photography is important in advertising, journalism, television, theatre movie industry, and recreation.

Main Ideas:

1. Photography and filming is an outlet for artistic and dramatic talents.
2. Photography and filming is based on science technology in areas of physics, chemistry, and psychology.
3. The photographic technician can earn a good living in repairing equipment, selling equipment and processing film.

Quests:

1. research into the cost of photography equipment.
2. Scrapbook of some of the prize-winning photographs (Life Magazine, newspapers)
3. Have student compare old pictures and new picture itself.
4. Research into the laws governing films and photography.
5. Visit to local photography shop.

Career Opportunities: Advertising audio-visual director, advertising copywriter, advertising manager, advertising-media buyer, advertising salesman, art director, laboratory aide, laboratory technician, photographer, printing cameraman, printing plant superintendent.

Career Development Curriculum Guide: Grade 7
Communications and Media, Film and Photography

LANGUAGE ARTS

Purpose: To see that careers in photography fit both technical and artistic talents.

To realize that photography interlaces all the communication industries.

To improve personal visual literacy.

Objectives: Upon completion of work in this unit, the student should be able to:

1. State that "filming" is essentially a composition activity.
2. State that understanding pictures is primarily a decoding activity.
3. Demonstrate skill in coding and decoding through visuals.
4. Make inferences from visual situations.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Write (print) legends for bulletin board pictures taken by members of the class.
2. Do the flyers and announcements for the photography contest. Tie-in with Art Department.
3. Make slide/film presentations which are built on a prestructured storyline.
4. Create the sound track (dialogue, music, effects) for a silent film.
5. Write a review of the Kodak program on visual literacy, showing how viewing is composing.
6. Collect various cartoon strips and write in the blurbs; make into class booklets. Tie-in with Art Department.
7. Have students research the following words, with emphasis on those related to photography:

visual composition
verbal art

symbolism
compound personal pronouns

Career Development Curriculum Guide: Grade 7
Communications and Media, Film and Photography, LANGUAGE ARTS

Activities -- Continued

plot	possessive pronouns
acuity	enunciation
visual perception	panning
motor skills	scanning
antecedents	climax
recurring events	denouement
symbol	

Materials:

1. Kodak "Visual Literacy" program
2. Camera, slide-film, flash bulbs
3. A silent film (non-commercial home movie would do)
4. Old funny papers to cut out comic strips
5. Letters (to trace) for the photography bulletin board
6. Blank tape to record new sound track
7. Tape recorder

Notes:

Tie-Ins with Other Subject Areas

Art may want to design (suggest) a novel way to bind cartoon strips.
Mathematics may want to go into pricing of various photographic materials, computing distances in relation to light shots, etc.

Tie-Ins with Specific Career Related Skills

Sharp eyes are valued in every job: push visual alertness.
Making inferences from visual situations is vital to survival;
stress to develop children's skill.

Career Development Curriculum Guide: Grade 7
Communications and Media, Film and Photography

MATHEMATICS

Purpose: To show the student the usefulness of mathematics in determining the cost of photography and savings that may be had through selective buying.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Demonstrate his ability to add, subtract, multiply and divide using numbers expressed with decimal fractions.
2. Compare decimal fractions in terms of order.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Have the student calculate the cost of developing pictures using the Polaroid camera and Kodak camera taking into consideration the cost of film. Have the students compare the cost per picture for each camera. Compare use of two types in tie-in with Graphic Arts.
2. The teacher is to survey the students in his class relative to the types and total number of cameras that the students and their parents own. The students are to calculate the total amount of money spent on cameras by the class. They are then to calculate the total amount of money spent by the entire school assuming that their class is a representative sample. Also perform the same survey for TV sets and attending movie shows and do the same calculations. Construct ratios of the three types of spending. Tie-in with Home Economics, Business.
3. Have the students find out the average amount of film his family uses in a month. The student is to calculate the total cost of the film and processing. The teacher and students are to calculate the total cost of the film and processing of film. Using this information as a representative sample of the entire school, calculate the total amount of money spent on film and processing. Determine the proportion of the total cost used for processing vs. purchase of film.

Materials:

1. Price list for cost of photographic equipment

Career Development Curriculum Guide: Grade 7
Communications and Media, Film and Photography, MATHEMATICS

Materials -- Continued

- a. Photography magazine
- b. Price list for processing film in the local drug-store (Dart Drugs, Rodman's, Peoples Drug Store) and the cost of various types of film.

2. Total number of students in the school.

Note:

Instructional activities (2) and (3) are designed to show that photographic equipment is a billion dollar industry.

Career Development Curriculum Guide: Grade 7
Communications and Media, Film and Photography

SOCIAL STUDIES

Purpose: To broaden students' knowledge of the world around us through pictures, films, maps, globes, and to develop their concepts of film and photography as it relates to occupations and careers.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Observe and evaluate the contributions of film and photography to the development of greater understanding of the world's people.
2. Observe and analyze the role of pictorial reporting as the most universal of all languages.
3. Display data showing that pictorial reporting involves the use of maps, charts and drawings in addition to the more commonly known aspect of image-making.
4. Describe the important role of aerial photography and picture symbols in the charting of land and water formations and political boundaries of an area.
5. Identify the geographical features of his city, country and other parts of the world through the use of maps, globes, and pictures.
6. Operate audio-visual equipment in his school.
7. Describe several areas of specialization in film and photography.
8. Describe some of the job opportunities involved in film and photography.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Students will collect high impact pictures and photographs that tell stories and explain to the class the reasons for selection, and then discuss the aphorism "One Picture is Worth a Thousand Words."
2. Resource Person: teacher will arrange to have one or more of the following representatives to explain the technical aspects and the practical uses of their trade:

Activities -- Continued

- a. School audio-visual representative
- b. A professional photographer (Robert Scurlock - 1831 18th Street, N. W. - Ad 2-7544)
- c. A photographer from the Army Map Service

Have students write a summary of information presented.

3. Students will make a picture scrapbook illustrating land use in the D. C. area.
4. Students will collect pictures illustrating the diversity of races in the D. C. area.
5. Students will discuss the reasons Washington, D. C. is considered an international inter-cultural center.
 - a. Interested students may telephone the Chancery of selected Embassies for materials describing the geography and culture of the country represented.
 - b. Field Trips. The teacher will attempt to arrange a class trip to an Embassy for a tour and briefing by an official.
6. Field Trip: Students can be taken on a sightseeing tour of the city. The idea is to take pictures of landmarks and physical features of the city in order to construct a picture library of Washington, D. C. The students can also inquire about obtaining brochures, pictures and maps of the places they visit.
7. The students will construct a picture library of D. C. in a strategic spot in the classroom using pictures collected on field trips and supplementary materials such as maps and wall posters from other sources.
8. The students will select countries from a list prepared by the teacher. The class will be divided into groups each of which will collect maps, pictures, and other materials about the geography and resources of their selected country. The culminating activity might be one of the following:
 - a. A scrapbook
 - b. Picture and information library
 - c. A skit (original)
 - d. A book (example: "My Book About Africa")

Activities -- Continued

9. Students will examine the use of the film and film-strip catalogues available in all schools. They may (with supervision) order films on the country they are studying and show them to the class.
10. The students will select from newspapers, magazines, and other resources pictures that symbolize life in a free society, as well as those that are symbolic of life in a totalitarian society.

Materials:

1. Lerson, Rodger. Young Filmmakers. E.P. Dutton and Company, Inc., New York, 1969.
2. Films to be selected from the school catalogue
3. Magazines: selected by teacher and students
4. Scholastic Scope
 - a. May 18, 1970
 - b. March 9, 1970
 - c. December 1, 1969

HOME ECONOMICS

Purpose: To help students increase their abilities to practice good grooming, as a pleasing appearance is often a key to success and happiness.

To motivate students to establish good grooming habits for personal attractiveness, for good health, and for employability.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Analyze themselves and others as to special qualities, emphasizing any assets and minimizing any imperfections.
2. List some of the aids and sources of help which are available to provide care for grooming needs of adolescence and early adulthood.
3. List several of the physical changes related to matur-
ation and glandular changes that call for additional outside care of skin and body.
4. State the importance of clean hair that is styled to suit facial features, as a social asset, a health requirement.
5. State that proper experimentation and use of cosmetics and grooming techniques may lead to greater employability.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Students will prepare a list of characteristics that mark a well-groomed boy/girl.
2. Students will prepare charts. In the first two column they write their good points and the points on which they need to improve. In the third column, they write plans for improving appearance (posture, etc.)
3. Have students do a before-and-after analysis of self. Students will take a "photo" of each other. Check hair styles as to becoming for face shape. At the end of the unit, another picture will be taken as a way of comparing each student's improvement.
Tie in with Science.

Activities -- Continued

4. Prepare a shampoo mixture in class by shaving a bar of mild soap into a bowl, covering it with boiling water, and letting it dissolve until it becomes a jelly. Have a class committee find out the prices of commercial cream and liquid shampoo. They will need to read labels to find out the ingredients and how many fluid ounces each product contains. Compare the prices of these commercial shampoos with the one you made and compare differences in components. Figure out the saving per twelve ounces on shampoo made, as compared to the cost of commercial shampoo. Tie-in with Science, Mathematics.
5. Have students research three skin problems which need special treatment for control or cure.
6. Resource Person: Have dermatologist give demonstration on skin care and talk on effective treatment for teenage disorders.
7. Have students compare cosmetic commercials from television or radio. Buzz session: How many commercials are recommended by Good Housekeeping and Food and Drug Administration?
Are there obvious gimmicks?
8. Students and teacher prepare classroom display of essential grooming aids such as antiperspirants and antibacterial preparation, as well as nice-to-have or non-essential aids. Empty cartons or wrappers might be used for the display.
9. Have students research and report on glandular changes related to maturity and relationship to hygiene and grooming.

Materials:

1. Films^{*}
 - a. "As Others See You" -- (FS McGraw, 35 fr.)
 - b. "Body Care and Grooming"
 - c. "Making the Most of Your Family" -- (MP Coronet, 11 min., color)
 - d. "How to Look Like a Model" -- Pet, Inc., free
 - e. "A More Attractive You" -- Knox Gelatin Company, free
 - f. "Make Good Grooming a Habit"

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Communications and Media, Photography, HOME ECONOMICS

Materials -- Continued

2. Books:
 - a. Barclay and Champion. Teen Guide to Homemaking. New York: McGraw-Hill, 1961.
 - b. Archer, C. Let's Face It. Lippincott Company.
 - c. Davis, M. and Peeler, Y. Lessons in Living. Boston: Ginn and Company, 1970.
 - d. Spears, C. W. How to Wear Color. Minneapolis: Burgess Publishing Company, 1965.
3. Pamphlets:
 - a. "A More Attractive You" -- Knox Gelatin, free
 - b. "Grooming Series 6" (grooming, hair, make-up manicure) -- Knox Gelatin
 - c. "When Women First Wore Make-Up" -- Reading Attainment System

Notes:

Tie-In with Other Subject Areas

Physical Education -- set up special exercises for improving posture

INDUSTRIAL ARTS

Purpose: To show the student the use, function, and structure of the simple camera. Note: The work here should be coordinated closely with that in Science; see SCIENCE, Advertising.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Identify the different types of cameras used by amateur and professional photographers.
2. List each of the basic parts of a camera and its function.
3. Demonstrate a basic skill in photography.
4. Describe the process of manufacturing films.
5. State the basic principles of operating a darkroom.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Students will construct a simple camera.
2. Students will make a display of the different types of cameras and their uses.
3. Students will take pictures of comrades at work.
4. Field trip: Students will visit a darkroom to observe the development of films.
5. Students will set up a darkroom.
6. Students will develop negatives taken in the shops in the darkroom.
7. Participate in a teacher-led discussion of possibilities for amateur and professional photographers.
8. Have students research and write a report on the steps involved in manufacturing film.

Materials:

1. Lens (concave and convex)
2. Sheet metal and accessories

Career Development Curriculum Guide: Grade 7
Communications and Media, Film and Photography, INDUSTRIAL ARTS

Materials -- Continued

3. Film(s) (negatives -- black/white and color)
4. Cameras and accessories
5. Print paper
6. Development fluids

Notes:

Tie-Ins with Subject Matter

Science (scientific process for developing negatives)
Mathematics (fluid measures, enlarging photos)

Career Development Curriculum Guide: Grade 7
Communications and Media, Film and Photography

PHYSICAL EDUCATION

Purpose: To show how the technology of film and photography has improved sports.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Describe the use of motion picture film in reviewing sports activities.
2. List several advantages of the stop-action, slow-and-fast motion techniques used to point out mistakes as a training aid in sports.
3. Describe how good filming and photography of a favorite sport can be used to improve spectator interest in the game.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. View a movie of a seasonal sport that illustrates how stop-action and slow-motion shots hold interest and discuss reasons for greater interest.
2. Have each student take a picture of another student who is participating in a sport, and develop the pictures and make a display of those that can be used as training aids.
3. Have students bring in photographs from magazines that are useful for teaching purposes, and make a classroom display with appropriate legends.
4. Field trip: Visit a film center to see different types of films and cameras. This should include 8, Super 8, 16 and 35 mm film, as well as zoom, wide angle and tele-scopic lenses. Have students each state which type he would prefer for his favorite sport and why. Tie-in with Science and Mathematics.

Materials:

1. Film: (teacher's choice) see Activity 1.

CLUSTER 2 - Grade 7

COMMUNICATIONS AND MEDIA

Unit/Topic 3 - Radio and Television

Career Development Curriculum Guide: Grade 7
CLUSTER/MODULE: COMMUNICATIONS AND MEDIA

Topic: Radio and Television

Purpose: To acquaint the students with the opportunities available by television and radio and to emphasize the high impact that radio and television have on today's society.

Main Ideas: The main idea is to show how radio and television can influence the thinking of the people in relation to their buying habits, modes of dress, oral expression, and status symbol.

- Quests:
1. Research into how radio programs have changed.
 2. Have students construct a setting similar to television and present drama.
 3. Have students present the old-fashioned type radio drama in class.
 4. Research into how television has changed the family unit and its impact on the behavior of children.

Career Opportunities: Actor, actress, advertising audio-visual director, advertising clerk, advertising copywriter, advertising manager, advertising mediabuyer, advertising salesman, art director, electronics technician, engineering technician, illustrator, instrument repairman, operating engineer, radio or television announcer, radio or television broadcast technician, radio or television producer-director, radio or television service technician, electrical engineer, news editor, reporter, rewrite man, sports editor.

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Communications and Media, Radio and Television

LANGUAGE ARTS

Purpose: To learn the wide range of jobs related to radio and television.

To realize the high impact radio and television have on modern society.

To be critical and discriminating in using radio and television.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Distinguish the fact programs from the fiction programs on both television and radio.
2. Label examples of unfounded generalizations, slant, bias, point of view as such.
3. Use structural analysis skills and relate television drama to books (theme, character, plot, conflict, style).

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Field Trip: Visit radio station and do individual writeups (personal essays).
2. Quest/Field Trip: Make a video tape when visiting Washington Technical Institute.
3. Alert children to television dramas to watch at home: do in-class analyses the following day.
4. Resource Person: Have the students host visit of disc jockey to school: prepare welcome signs in auditoriums, make introductions, write follow-up thank-you letters.
5. Quest: Write and tape a pretend radio program complete with music, commercial, news items; play to another class.
6. Quest: Make a "Mini-Review Book": do critiques of three films viewed in school as well as others done for extra credit at home. Follow key factors in structural analysis memo.

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Communications and Media, Radio and Television, LANGUAGE ARTS

Activities -- Continued

7. Divide the words below among groups of students for research. Then have each group present its research findings to the rest of the students.

console	conflict
MC	characterization
microphone	style
intensity	stylistics
reception	slant
broadcasting	focus
pickup	point of view
amplification	intimacy
antenna	broad screen
soundtape	commercial
facsimile broadcasting	hyperbole
televiewer	personification
TV studio	metaphor
romantic	narrative
realistic	testimonial
escape fiction	reaction
propaganda	discrimination
innuendo	bias
theme	

Materials:

1. Films:
 - a. "Effective Listening"
 - b. "Do Words Ever Fool You?"
 - c. "The Nature of Communication"
2. Colored paper to make balloon signs for disc jockey visit
3. Blank tape (audio), tape recorder
4. Records, record player
5. Video tape for use at Washington Technical Institute (Video tape can be purchased [1 inch] for about \$25.00 an hour.)
6. Video camera and recording equipment

Notes:

Tie-Ins with Other Subject Areas

Mathematics may want to do cost accounting of programs and compare radio and television costs.
Social Studies may look into the worldwide effect television has had on native cultures, and the potential effect it could

Career Development Curriculum Guide: Grade 7
Communications and Media, Radio and Television, LANGUAGE ARTS

Materials -- Continued

have in countries which do not have it and which have a high illiteracy rate, e.g., India, Egypt, Pakistan, Iran.

Tie-Ins with Specific Career-Related Skills

Listening, receiving communication is a sophisticated skill:
stress critical, discriminating reception.

Words help or hinder social interaction: emphasize alertness
to word and meaning.

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Communications and Media, Radio and Television

MATHEMATICS

Purpose: To show the student the importance of mathematics in radio and television programming relative to the maintenance of programs.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Tabulate data obtained from a survey.
2. Convert a common fraction to a percent, and the converse.
3. Arrange percents in order from highest to lowest.
4. Perform the four basic operations on decimal fractions.
5. Construct line and bar graphs.
6. Interpret line and bar graphs.
7. Give a working definition of the terms horizontal axis and vertical axis.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Have the students conduct a survey of the Mini-school patterned after the Nielsen Rating for determining what radio and television programs are most popular. The students are to design a questionnaire for the purpose of conducting the survey. The students are to organize the results of the survey according to specific radio and television programs with the total number of favorable responses. The students are then to calculate the percents for each program and arrange the programs from the highest percent to the lowest percent. Present the data in graphic form, plotting programs against percents.
2. Have students interpret graphs made in Activity 1. Tie-in with Language Arts.
3. Have the student conduct a survey of the toys and other items that his family has purchased as a result of having been influenced by advertisements. The student is to calculate the

Career Development Curriculum Guide: Grade 7
Communications and Media, Radio and Television, MATHEMATICS

Activities -- Continued

yearly cost to his family in direct response to radio and television advertisements. Tie-in with Social Studies.

Materials:

1. Graph paper
2. Paper for questionnaires--Print Shop Paper

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Communications and Media, Radio and Television

SCIENCE

Purpose:

To inform the students of the increased importance of radio and television to the scientist since the mid 1960's and to develop the student's interest in careers related to the areas in the radio and television industry. In science, radio and television not only influence our thoughts and our likes and dislikes, but they add to our store of knowledge. Radio telescopes and television cameras make it possible for astronomers to broaden their knowledge of outer space. Special transmitters make it possible to track the paths of rockets and guided missiles. Television permits surgical operations to be telecast so that doctors can watch a close-up of a specialist handling a case. Communication satellites make it possible to send radio messages and television programs between distant parts of the earth. Indeed, many branches of science would be handicapped without the technical outlets of radio and television.

Objectives:

Upon completion of work in this unit, the student should be able to:

1. List several of the areas in science which depend largely on radio and television technology.
2. Describe at a minimal level how remote control devices work by radio.
3. Describe at a minimal level how a radio and a television operate.
4. Describe at a minimal level how animals and objects are tracked by radio signals.

Activities:

To accomplish the objectives, the student may engage in activities such as:

1. Students will view one film on radio and one on television and write a brief summary. Suggested films are listed in the introduction to this topic.
2. The Students will research, list and discuss the uses of radio and television in science exploration and discovery.

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Communications and Media, Radio and Television, SCIENCE

Activities -- Continued

3. The teacher will develop block diagrams of how a receiver works and discuss its operations with the students.
4. Have students construct a simple radio receiver crystal set from plans in standard reference book. Tie-in with Industrial Arts.
5. Have students research and report on specialized uses of small radio transmitters in tracking satellites and missiles, in tracking both land and marine animals, and in navigational and weather aids.
6. Teacher will discuss how color television works as opposed to black and white television. Use large diagrams to compare and contrast the operation of each set.
7. Have students research and report on the major steps in the development of radio from Hertz and Marconi to the modern transistors and radar.

Materials:

- | | |
|-----------------------|---|
| 1. Hammer | 9. Lead pencil |
| 2. Pliers | 10. Drawing paper |
| 3. Wood board | 11. Razor blades |
| 4. Nails | 12. Safety pins |
| 5. Metal thumbtacks | 13. Pocket knife |
| 6. Copper wire | 14. Crystal detector |
| 7. Cardboard tubing | 15. Variable-condensers |
| 8. Pairs of earphones | 16. Diagrams of black and white and color televisions |

SOCIAL STUDIES

Purpose: To point out the excellent career opportunities and opportunities for learning provided by this media.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Analyze the nature and location of the industry.
2. List several occupations in radio and television.
3. Describe ways to research the future employment outlook in this media.
4. Give several illustrative examples of how television and radio provide a variety of opportunities for us to learn about ourselves and others.
5. Give examples of the starting salaries and general working conditions related to this media.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. The student will carry out research to determine how many commercial radio stations are in operation in the metropolitan area and distinguish between AM and FM.
2. The student will find out how many commercial television stations are in operation in the metropolitan area and distinguish between VHF and UHF stations.
3. The students will ~~make~~ make a chart showing the training and other qualifications needed for several different types of jobs in the industry.
4. Have the students find out why there is a need for the Federal Communications Commission.
5. Have the students watch the 6:00 p.m. newscast and record the names of the countries from which items are reported. Tie-in with Journalism, Language Arts.

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Communications and Media, Radio and Television, SOCIAL STUDIES

Activities -- Continued

6. Have the students write an essay to read to the class on the educational value of one television program, e.g., National Geographic, Sesame Street. Tie-in with Language Arts, Science.

Materials:

1. United States outline maps
2. Chart board
3. Radio and Television Broadcasting Occupations, U.S.
4. Newspapers

INDUSTRIAL ARTS

Purpose: To acquaint the students with the electrical mechanisms of a radio.

Objectives: Upon completion of work in this unit, the student should be able to:

1. List several opportunities for technicians in radio and television.
2. Demonstrate a minimal technical background in radio and television repair and services.
3. List the basic parts and functions of a transistor radio.
4. Describe the basic operations of a radio station.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Field Trip: Have students visit a radio station (WOOK), and write a description of aspects observed.
2. Field Trip: Have students visit a television station for live production (WETA), and write a description of aspects observed.
3. Field Trip: Have students visit Phelps Vocational School radio and television repair shop, and write an essay either for or against the occupation of a repairman.
4. Have students construct a transistor radio from a radio kit.
5. Resource Person: Students and teacher will have a rap session with disc jockey from local radio/television station who might assist with set-up of "small station". Have students research and list required equipment.

Materials:

1. Transistor radio kit (instructions included)
2. Shop tools and equipment (electrical)
3. Career resource information
4. Transistor radios (models/charts)

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Communications and Media, Radio and Television, INDUSTRIAL ARTS

Notes:

Tie-Ins with Other Subject Areas

Science (electrical energy, capacitors, voltage, receiver)

Language Arts (communications)

Mathematics (Ohm's Law, time telling, etc.)

SIC

Purpose: To acquaint the students with job opportunities available to radio and television.

To show the students that the amount of music consumed by society today because of the mass-communications media, particularly radio and television, is tremendous.

To bring the students' attention to the fact that a musical background is used for sponsors' messages, cartoons, soap operas, news movies talk shows, etc.

To explain that the music used in these media keeps many people employed, and provide information on careers that exist in radio and television.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Describe several of the career opportunities in the music field that are available in radio and television.
2. Give examples of music of composers which has been extensively utilized in commercials, cartoons, news, etc.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Resource Person: The teacher will arrange a visit to the class by the music director of local TV or radio stations.
2. Have students prepare a schedule of radio and television performances of music in which they are interested for the school paper. (Students may also prepare a schedule for the school newspaper for another age group.)
3. Arrange individual or group interviews with professional musicians in the local area, and have students follow-up with written or oral reports to the class.

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Communications and Media, Radio and Television, MUSIC

Activities -- Continued

4. Have students research career opportunities in radio and television, and prepare a bulletin board display.
5. Have students compose a musical jingle for a product. Tie-in with Advertising, Language Arts.
6. Tape music from commercials and shows, and have the students learn to identify their titles and/or composers.

Materials:

1. Tape recorder
2. Record player
3. Manuscript paper
4. Records
5. Book: Career and Opportunities in Music by Alan Rich

ICAL EDUCATION

ose: To acquaint the students with some of the programming techniques used in radio and television media that are geared towards increasing spectator interest in sports.

ctives: Upon completion of work in this unit, the student should be able to:

1. To show how in the field of sports the colorman has to improve the understanding of what the players are doing on the field.
2. Explain how video replay of existing or important plays increases spectator interest.
3. Explain the role of the female sports commentator in interviewing female athletes and the wives of athletes.
4. List some of the careers offered in sports in the fields of radio and television.

vities: To accomplish the objectives, the student may engage in activities such as:

1. Resource Person: The teacher will arrange a visit to school by a local sports announcer (commentator).
2. Field Trip: The teacher will schedule a tour of a television station where the students can observe while a sports director makes and explains layout plans for an upcoming sports program. Have students compile a list of required personnel.
3. Field Trip: The students will attend a sports activity that is being televised to see how much equipment is needed to produce a sports program. Have students compile a list of personnel involved.
4. Have the class discuss and compare listening to a game on radio to viewing the same game on television.

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Communications and Media, Radio and Television, PHYSICAL EDUCATION

Activities -- Continued

5. Resource Person: A visit by the public relations person of a professional team will be arranged if possible to inform the students of the methods they use to improve spectator interest in the game through the media of radio and television.
6. The teacher will lead a discussion of careers in radio and television that are related to sports.

Materials:

1. Radio
2. Television

Notes:

Tie-Ins with Other Subject Matter

Mathematics
Science
Public Speaking
Language Arts

CLUSTER 2 - Grade 7

COMMUNICATIONS AND MEDIA

Unit/Topic 4 - Journalism and Publishing

Career Development Curriculum Guide: Grade 7
CLUSTER/MODULE: COMMUNICATIONS AND MEDIA

Topic: Journalism and Publishing

Purpose: To acquaint the students with procedures involved in journalism and publishing and their importance in the realm of communications and media.

While students read many different magazines, they are not aware of the impact that journalism and publishing have on our society and the world. Although seventh graders may not be ready for an in-depth analysis of journalism and publishing, they are ready to grasp some of the more simple important factors related to this area.

Background information related to the following points is considered important:

1. How journalism and publishing influence public opinion.
2. Censorship involved in journalism and publishing.
3. Job opportunities in the field of journalism and publishing.
4. The usage of certain words to influence attitudes and opinions.
5. Language peculiar to the different forms of journalism.
6. Types of publishing companies.
7. Types of journalism.
8. Importance of editorials.

Main Ideas: The major emphasis will be to improve the student's understanding of journalism and publishing by:

1. Showing the importance of journalism and publishing in society.
2. Showing how journalism influences our thinking on certain specific issues.
3. Explaining the purpose and use of censorship.

Quests:

1. Research of cost involved in publishing a newspaper or magazine.
2. Clip articles from magazines and newspaper on a given topic, then compile a research report.
3. Research into the history of publishing.
4. Comparison of old magazines to new ones noting the change in format and style.
5. Students write their own magazine.

Career Development Curriculum Guide: Grade 7

CLUSTER/MODULE: COMMUNICATIONS AND MEDIA, Journalism and Publishing

Career Opportunities: Advertising clerk, advertising copywriter, advertising manager, advertising salesman, art director, bindery machine operator, bookbinder, book designer, book editor, illustrator, journalist, linotype operator, litho-artist, litho-platemaker, lithography proofer, news editor, photographer, printing cameraman, printing plant superintendent, printing pressman, printing salesperson, proof-reader, reporter, rewrite man, sports editor, technical writer.

Career Development Curriculum Guide: Grade 7
Communications and Media, Journalism and Publishing

LANGUAGE ARTS

Purpose: To see how mass communication influences both individuals and society.

To learn about the variety of jobs in publishing industries.

To improve personal power in manipulating words.

To appreciate the power of language in shaping human thought and action.

Objectives: Upon completion of work in this unit, the student should be able to:

1. List some of the jobs available in journalism and publishing.
2. Reconstruct the history of writing through the ages.

Activities:

To accomplish the objectives, the student may engage in activities such as:

1. See four films listed under Materials and write critiques, paying special attention to use of the present tense (as journalists do).
2. Make a time chart for bulletin board display- "From Primitive Times to Now in Writing." Show the development of communication symbols from runes, hieroglyphics, and pictographs to printing presses and computers.
3. Organize the Minischool paper. Collect articles from all tours in this unit as well as film critiques, history of publishing (quest), history of writing, and write-ups on speaker from Washington Technical Institute. One column in the paper can be "Careers in the Publishing Business."
4. Have students find out the meaning of each of the following words as it relates to printing, publishing or journalism.

lead
galley

page proof
offset

Development Curriculum Guide: Grade 7
 Communications and Media, Journalism and Publishing, LANGUAGE ARTS

ities -- Continued

editorial	slug
news-story	underlay
copy editor	draftsman
journalist	moveable type
treatise	bold face
composing frame	italics
gutter	upper case

ials:

1. Films:
 - a. University of Iowa:
 - "Newspaper Story"
 - "Writing Through the Ages"
 - "Word Building in Our Language"
 - b. Coronet:
 - "How to Read Newspapers"
2. Layout Boards for newspaper
3. Long stencils--legal size
4. White paper--legal size to run off newspaper
5. Construction paper and corrugated paper for timeline

s:

Tie-Ins with Other Subject Areas

Social Studies may supply data and pictures for timeline on the history of writing; may want to show how under-developed countries lack mass communication industries involving reading; people are not literate.

Mathematics may want to organize some simple statistical tables on numbers of persons in various countries owning television sets; reading 1 newspaper, 2 newspapers, etc.

Tie-Ins with Specific Career Related Skills

Build positive attitudes toward mass communication.

Press for importance of single jobs in a corporate industry (cooperation).

Show how the manipulator of language can control his job surroundings, and retain his individuality in spite of mass communication.

Career Development Curriculum Guide: Grade 7
Communications and Media, Journalism and Publishing

MATHEMATICS

Purpose: To make the student aware of how mathematics plays an important role in influencing public opinion through journalism and publishing.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Add and divide decimal and whole numbers.
2. Identify situations in which ratio is applicable and to use ratio as a means of comparison.
3. Find a missing element in a proportion.
4. Construct a proportion when appropriate in a given problem situation.
5. Convert a common fraction to a percent and the converse.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. The students will write a sports report on one of the school's basketball games, and collect data from the previous year. The students will calculate the following statistics for the game viewed or for the previous year:
 - a. Total points for each team and player for that game.
 - b. Team and player average per game for the year.
 - c. Team and player free throw percentage for the game.
 - d. Team and player free throw percentage for the year.
 - e. Total points scored in the first, second, third, and fourth quarters for each team for the game.
 - f. Average total points scored per game in the first, second, third, and fourth quarters for each team for the year.
 - g. Team and player field goal percentage for the game.
 - h. Team and player field goal percentage per game for the year.

Activities -- Continued

- i. Turnovers by each team for the game (total number)
 - j. Average number of turnovers for each team per game.

(Another game may be preferable.)
 2. From the game data the students should analyze the reason(s) the school won or lost the game.
 3. The students will take various statistics from the newspaper, television, etc. and demonstrate to the class how these may be used both pro and con in relation to the issue they describe.
-
1. Equipment
 - a. Flannel board
 - b. Ruler
 - c. Fraction chart
 - d. Pantograph
 - e. Blocks
 2. Filmstrips (D.C. Public Schools Film Catalog)
 - a. "Fraction Series" (elementary), #273-281
 - b. "Decimal Fraction Series" #1259-1263
 - c. "Fraction Series" (elementary and secondary), #1313-1320
 3. Amazing Arithmetic Series
 - a. Different Differences #1881
 - b. Pleasing Products #1882
 - c. Quotient Quests #1883
 - d. Fraction Findings #1884
 - e. Zero the Forgotten Number #1885
 - f. Some Sums #1886
 - g. Fraction Forms #1887
 - h. Fractions Facts #1888
 - i. Knowing Number #1889

Notes:

Tie-Ins with Other Subject Areas:

Language Arts

SCIENCE

Purpose: To make students aware of the special approach to writing and reading science materials. Writers and teachers generally agree that the student needs special help in developing skills, attitudes, and an understanding of scientific materials.

Objectives: Upon completion of work in this unit, the student should be able to:

1. State the equivalent of "careful writing and reporting make discoveries in science easily available to other scientists and to the non-scientist."
2. Make observations, form hypotheses, and draw necessary conclusions at the level specific in the activities.
3. List some careers in journalism and publishing that require a knowledge of science.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Collect several science publications and examine all facets of how they were printed and published. Begin by using publications that may be familiar to the students already, then introduce others (e.g., Science Digest, Current Science, Science World). Have students develop a list of types of jobs that have to be performed to produce a periodical.
2. The students will perform several activities which will require them to make hypotheses and draw conclusions about what truly represents what one observes (re: course of study Grade 7-general science). Assign two students to cooperate in writing up each experiment for school paper.

Exercise: Can your senses be relied upon?

- Activity:**
1. Judging temperature
 2. Judging length of time
 3. Judging weight
 4. Locating source of sound
 5. Judging an object by touch

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Activities -- Continued

3. Students will perform activities which will enable them to become more adept in stating hypotheses. Assign students to write about experiment for the school paper.

Exercise: Setting forth hypotheses

- Activity: 1. Floating and sinking of density balls
2. Arrange apparatus for Hero's Fountain

4. Field Trip: If possible, arrange for the class to visit the National Geographic or AAAS offices, and write up their tour for the school paper.
5. Students will perform activities which will test their scientific attitudes. First the student will select articles from newspapers and magazines. After each selection from an article the teacher should place statements that may or may not be expressed in a scientific manner. Allow the student to choose the statements that they feel are expressed scientifically and to explain why.

Materials:

1. Density balls
2. Coins
3. Whistle
4. Erlemeyer flask
5. Ring stand
6. Glass tubing
7. Source of heat
8. Selections from newspapers and periodicals, e.g.,
 - a) Science Digest
 - b) Current Science
 - c) Science World

Notes:

Tie-Ins with Other Subject Areas

Language Arts

INDUSTRIAL ARTS

Purpose: To introduce the student to some of the printing procedures utilized in publishing.

Objectives: Upon completion of work in this unit, the student should be able to:

1. State what offset printing is and how it differs from letter-press.
2. Make adjustments on the offset press.
3. Write on a direct image plate.
4. Etch direct image plates.
5. Place plate on press and print 50 copies.
6. Remove plate and clean up press.
7. Put press in the safety position when it is not in use.
8. List some of the career opportunities available in printing.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Have students view movie, "What is Offset Printing?" and write a review of it for possible use in the school newspaper. (D.C. Public Schools Film Catalogue)
2. Have students make address card on direct image plate.
3. Have students make adjustments on press (inking, fountain solution delivery, pickup).
4. Have students etch plate, place plate on press, and print 50 copies.
5. Have students remove plate and clean up press.
6. Have students return press to "night-latch" position.

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Activities -- Continued

7. Field Trip: Have students tour McArdle Printing Company and Capitol Ink Company and write about their tours for the school paper.
8. Have students compile shop notebook on tours, movies and on technical terms (new words). Terms, in addition to those underlined above, should include:

platemaker	blanket wash
pressman	printers measure
proofreader	layouts
illustrator	AB Dick reproduction pencil

Materials:

1. Direct image plates
2. Ink
3. Fountain solution
4. AB Dick reproduction pencil and eraser
5. Etch solution
6. Blanket wash
7. Ruler
8. Other graphic arts equipment
9. Films "What Is Offset Printing?"

Notes:

Tie-Ins with Other Subject Areas

Language Arts -- writing, editing, vocabulary building
Science -- chemistry of printing inks, chemistry of printing papers, use of etch, blanket wash, and fountain solution
Mathematics -- estimating measuring with printers measure layout of newspaper, calculating cost for advertisements, reading counting machine, and cutting paper for desired size.
Social Studies -- history of printing-offset and letter press, alphabet

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Communications and Media, Journalism and Publishing

MUSIC

- Purpose: To develop the students' journalistic skills as they relate to music.
- To show the need for trained music critics in the field of newspaper and magazine journalism.
- Objectives: Upon completion of work in this unit, the student should be able to:
1. List elements that should be included in all critical writing on musical events.
 2. List several job opportunities in the field of journalism as it relates to music.
- Activities: To accomplish the objectives, the student may engage in activities such as:
1. Field Trips: The teacher will arrange the students' group attendance at specific local concerts about which they will write a review of the performance and music heard. They should then compare their reviews with that of the POST or STAR to determine if any elements have been left out.
 2. Assign or ask for volunteers to write program notes for concerts to be given by school performing groups; e.g., band, glee clubs, etc., and to write reviews of concerts for school paper. Tie-in with Industrial Arts.
 3. Resource Person: Visit to class by music critic if the teacher can arrange it. Have students check their list of elements to be included in reviews against what the critic says.
 4. Have students rotate on assignment to make the following contributions to the school newspaper:
 - a. A monthly calendar of events which would include opportunities to hear music.
 - b. Selection of an LP of the month, with comments about why it was chosen;
 - c. Selection of a "45" of the month, with some information on this choice;
 - d. A monthly column spotlighting a contemporary performer or performing group.Tie-in with Social Studies

reer Development Curriculum Guide: Grade 7
mmunications and Media, Journalism and Publishing, MUSIC

aterials:

1. Record player
2. Records

CLUSTER 2 - Grade 7

COMMUNICATIONS AND MEDIA

Unit/Topic 5 - Library and Periodicals

Career Development Curriculum Guide: Grade 7
CLUSTER/MODULE: COMMUNICATIONS AND MEDIA

Topic: Library and Periodicals

Purpose: Since the library is the main storehouse of printed matter, this unit will attempt to increase the student's knowledge of the importance and use of it.

Main Ideas:

1. To give the students a general knowledge of the materials available in the library.
2. Procedures in obtaining books.
3. To acquaint the students with all types of libraries available to their use.

Quests:

1. Have student volunteer his services in the library.
2. Write for free periodicals.
3. Have students use machines in the library to reproduce written or printed matter.

Career Opportunities: Clerk typist, bookbinder, librarian, media center director, medical records librarian, receiving clerk, tape librarian.

Career Development Curriculum Guide: Grade 7
Communications and Media, Library and Periodicals

LANGUAGE ARTS

Purpose: To learn all about libraries.

To develop interest and skill in using the library.

To see how many careers are related to library work.

To appreciate the library as a rich and constant reservoir of knowledge.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Locate information in the library by using the card catalogue, decoding classification systems and finding books on the shelves.
2. List some career opportunities available in connection with libraries.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Have students get personal library cards.
2. Have students use a bibliography and go to the library for a particular book.
3. Have students make book reports (oral and written), read favorite passages to class.
4. Have students make a bulletin board titled "Library Reading," showing dust jackets and children's written reports on books.
5. Have students write content reviews of films and add words to their dictionaries (see Activity 6):
 - a. "The Library Story"
 - b. "Know Your Library"
 - c. "Library Organization"
 - d. "Choosing Books to Read"
 - e. "It's All Yours"
 - f. "The Library--A Place of Discovery"
 - g. "You'll Find It in the Library"
6. Have the students make their own "Dictionary of Library

Activities -- Continued

Terms" including the following terms, as well as those underlined above.

category
Library of Congress classification
Dewey Decimal classification
title card
author card
subject card
critique
commentary
bookman
librarian
filmography
perception
pacing
circulating library
bookmobile
nonprint resources
general references

7. Have students take a test on using the library; check understanding of classification systems.
8. Have students construct bibliographies of periodicals for teenagers.

Materials:

1. Seven film titles listed above
2. Standardized tests on using the library
3. Library books to illustrate classification categories
4. Paper and book jackets for "Library Reading" bulletin board
5. Check major companies for programmed materials on library usage that children may enjoy

Notes:

Tie-Ins with Other Subject Areas

Art teacher may want to suggest a novel 3-D way to set up hall bulletin boards on library reading.

Tie-Ins with Specific Career Related Skills

Emphasize the fact that libraries are for everyone--housewife and

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Communications and Media, Library and Periodicals, LANGUAGE ARTS

Notes -- Continued

working man, as well as for the scholar.

Show that career information is a part of the library's resources.

MATHEMATICS

Purpose: To provide the student with an awareness of the important role that mathematics plays in the organization and functioning of a library.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Read and write decimal numerals correctly through thousandths.
2. Arrange decimal numerals in increasing or decreasing order through thousandths.
3. Use the fundamental principle of counting.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Students will set up a mini-library within the Mini-school. The students will be required to shelve the books according to the Dewey Decimal System and briefly work with other systems.
2. Give the students a predetermined number to represent unclassified mathematics books from a certain field (geometry, for example) and let them decide whether this arbitrary number of books can be classified according to the Dewey Decimal System by calculating the total number of books that can theoretically be classified under the particular field chosen. If the books can be classified, the students are then to do it. If it turns out that there are not enough numerical spaces in the field chosen for the books to be classified, the students are then to figure how enough spaces can be provided. (Note: Leave out decimals at first.)
3. May discuss distribution of libraries in the city in relation to population density. Tie-in with Social Studies.

Materials:

1. Book: Know Your Library (Second Edition)

Notes:

Tie-Ins with Other Subject Areas:

Language Arts

Career Development Curriculum Guide: Grade 7
Communications and Media, Library and Periodicals

SCIENCE

Purpose:

To provide some practical suggestions and handy information to the student on the use of science periodicals and the use of the science section in the library.

To stimulate further thought and planning in the student's school work through continuous use of science periodicals and the library.

Objectives:

Upon completion of work in this unit, the student should be able to:

1. Name the specific Dewey Decimal Section in the library which classifies the areas in science.
2. List several science periodicals which will provide helpful information for doing class work.

Activities:

To accomplish the objectives, the student may engage in activities such as:

1. Field trip: The student and teacher will visit the school library or public library and discuss with the librarian the use of the Dewey Decimal classification in science, if they have not already done so.
2. The student will devise his own simple method of memorizing the categories of the Dewey Decimal classifications in science and describe it orally or in writing.
3. The teacher will print a list of titles and subjects in science to be handed to each student. This list should cover all of the major categories of science books, but should also include periodicals. The students will visit the library to find and record where information on the titles and subjects can be found.
4. Using information from Activity 3, have the students prepare a wall chart showing the categories in the 500 D. D. System.
5. The students and teacher will discuss the different periodicals available to the science student for use in implementing his science work and where they may be found in the library. Have sample copies of each periodical available during the discussion.

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Communications and Media, Library and Periodicals, SCIENCE

Materials:

1. Several science periodicals
 - a. Science World (Scholastic)
 - b. Current Science
 - c. Popular Mechanics
 - d. Popular Science
 - e. Science Digest

Notes:

Tie-Ins with Other Subject Areas

Language Arts

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Communications and Media, Library and Periodicals

SOCIAL STUDIES

Purpose: To reinforce the students knowledge of the use of the library and to show the simplest way to find out where in the library one can obtain specific information.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Efficiently use the card catalogue and distinguish between the three types of cards (title, author, subject).
2. State the Dewey Decimal category for social sciences and history.
3. Effectively utilize an encyclopedia for school work.
4. Locate references that will be most useful to him in social studies.
5. Use the index that is found at the back of most Atlases, Almanacs, and books on special subjects.
6. State where to find out the locations of and services available in the D. C. libraries.
7. Use the Readers' Guide to Periodical Literature to locate periodicals in Social Studies.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Have the students make and explain samples of the three types of cards found in the card catalogue.
2. Field trip: Have the students take a tour of the school and public libraries, if they have not already done so.
3. Have the students determine and describe how the Readers' Guide to Periodical Literature is used.
4. Have the students indicate on an outlined map of Washington, D. C. the location of the public libraries in D. C. The libraries that serve the school area may be highlighted by an asterisk. Tie-in with Art, for design of symbol of indication.
5. Have the students explore the educational requirements for employment in the different areas of the library.

Activities -- Continued

6. Have the students bring copies of periodicals to class and be able to identify each of the following as regards any country of the student's choice:

- a. a news story
- b. a human interest article
- c. a feature article
- d. an editorial

Tie-in with Journalism, LANGUAGE ARTS

7. Have the students tell in which kind of reference book, other than books on special subjects, one could find answers to the following questions:
 - a. Which countries of the world lead in coal production?
 - b. What river forms parts of its boundary between Uruguay and Argentina?
 - c. What countries of the world have a very light rainfall?
 - d. How are diamonds mined?
 - e. What kind of climate has Melbourne, Lagos, Australia, and Nigeria?
8. Have the students research and report on the effect that computers have had on library science.

Materials:

1. Reference Books
 - a. unabridged dictionary
 - b. encyclopedias
2. Yearbooks
 - a. The World Almanac
 - b. Information Please Almanac
 - c. The Statesmans' Yearbook
3. Atlases and gazetteers
4. Reference books about people
 - a. Who's Who in America
 - b. Websters' Biographical Dictionary
5. Note cards
6. Chart board

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Communications and Media, Library and Periodicals

INDUSTRIAL ARTS

Purpose: To show the student the significance of the library in industry and industrial arts.

Objectives: Upon completion of work in this unit, the student should be able to:

1. List skills that are essential in setting up an Industrial Arts Media Center.
2. Use library books and audio-visual aids as needed.
3. Use the library (media center) to gain information relating to business and industry.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Quest: Have students set up a media center (industrial arts) in appropriate area outside of main center. Build shelves for books, etc.
2. Field trip: Students and instructor will tour library to identify periodicals, books, and audio-visual aids if they have not already done so, and acquire materials in Industrial Arts.
3. Quest: Solicit books, periodicals relating to Industrial Arts from parents, teachers, industry.
4. Quest: Buy available materials (subscription to School Shop, Popular Mechanics, Mechanics Illustrated, etc.)
5. Resource Person: A representative from D. C. Public Schools' Education Media Center Personnel, will demonstrate Media Center equipment.
6. Quest: The instructor will assign research projects that require use of the library on materials and equipment relating to business and industry.

Materials:

1. Lumber
2. Power saw, hand saw, hammer, nails, screw driver
3. Square, plane, drawing instruments
4. (Record player), (Projector), (Slide projector), (Tape recorder)

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Communications and Media, Library and Periodicals, INDUSTRIAL ARTS

Notes:

Tie-Ins with Other Subject Areas

Science (observation and use)
Mathematics (construction of shelves)
Language Arts (communications)

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Communications and Media, Library and Periodicals

MUSIC

Purpose: To increase the students' knowledge of the music materials available to them in the library.

To acquaint them with the job opportunities that exist in the music field for librarians.

Objectives: Upon completion of work in this unit, the student should be able to:

1. List some jobs available in libraries.
2. Locate and obtain music records, sheet music and books from the library.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Field trip: Have the students visit the school library with explanation given about music materials that are available.
2. Have students form a mini-library within the storage room to house records, books, sheet music, and periodicals.
3. Have students devise a system for cataloging the materials for the mini-library.
4. Field trip: Have students visit the Music Division of the Congressional Library with explanation of jobs available.
5. Quest: Research the duties of the librarian of the National Symphony Orchestra.

Materials:

1. Books, records, sheet music, and periodicals available at the school.
2. Books, records, sheet music, and periodicals contributed by students and teacher.

CLUSTER 2 - Grade 7

COMMUNICATIONS AND MEDIA

Unit/Topic 6 - Transocean Communication

Career Development Curriculum Guide: Grade 7
CLUSTER/MODULE: COMMUNICATIONS AND MEDIA

Topic: Transocean Communications

Purpose: To help pupils understand that the network of worldwide communications expands our cognitive world and makes all of mankind neighbors.

Main Ideas:

1. The political changes in any one country are quickly known throughout the world.
2. How the technology of satellites, radio, and long distance telephone keeps the peoples of the world in touch with one another.

Quests:

1. Research in history of transocean communication.
2. Let student answer school phone and transfer calls for a day.
3. Student start overseas pen-pal writing.
4. Research into the overseas picturephone located at 17th and H Streets, N.W.
5. Research into the cost involved in transocean communications.

Career Opportunities: Electric lineman, electrician, electronics technician, engineering technician, general troubleman (electric utility), instrument repairman, layout draftsman, switchboard operator, systems analyst, systems clerk, technical or specifications clerks.

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Communications and Media, Transocean Communication

LANGUAGE ARTS

Purpose: To show the new closeness of mankind achieved via transocean communication.

To learn about the varied and interesting jobs in telecommunications.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Sift print and film data for main ideas as a part of carrying out research.
2. Use general reference books in the library to obtain information on a given topic.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Trace early transocean contacts of civilizations; use historical and general reference books in library.
2. Write biographical accounts of inventors concerned with cross-sea communication: McCormick, Marconi, Edison, NASA.
3. Individually view and abstract main points of two filmstrips: (Coronet: each 42 frames)
 - a. "How Satellites Stay in Orbit"
 - b. "Satellites and Their Work"

Teacher should provide feedback in the form of a master checklist of main points.

4. View films: (University of Iowa)
 - a. "Communication in the Modern World"
 - b. "Communication: Story of Its Development"
 - c. "Inventions in America's Growth (1850-1910)"
(Cable)

and have several students present film abstracts (reviews) to the class. Have the class judge those presented by comparing with their own reviews.

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Activities -- Continued

5. Resource Persons: Make a series of speaker tapes of talks given by representatives from COMSAT, Voice of America, Radio Free Europe, Western Electric, and C & P Telephone Co.

Materials:

1. C & P Telephone brings own equipment
2. Blank tape and tape recorder
3. Films: University of Iowa, See Activity 4 above.
4. Filmstrips: Coronet, See Activity 3 above.

Notes:

Tie-Ins with Other Subject Areas

Science may want to compare kinds of cables (technology) used long ago to modern means of communication.

Mathematics may want to do computations on overseas phone calls.

Tie-Ins with Specific Career Related Skills

Push for genuine research power: every person should be able to find information he needs.

Encourage the skill of abstracting and telling valuable facts quickly, coherently.

MATHEMATICS

Purpose:

To show the student some of the ways that the computer allows people to keep in touch with other people and the role that mathematics plays in the computer. The people of the world are able to maintain contact with each other through computer, radio, satellites, and telephone. All of these devices may be employed by countries who are in computer-to-computer contact with each other.

Objectives:

Upon completion of work in this unit, the student should be able to:

1. Convert base ten numerals to other bases and conversely as they relate to the computer.
2. Perform operations in bases eight (octal) and two (binary) as they relate to the computer.
3. Use the four basic operations with fractions in calculating the cost for using (buying time on) a computer.

Activities:

To accomplish the objectives, the student may engage in activities such as:

1. The teacher is to prepare some computer words for the students with certain bits representing some items of information. The students are to analyze each computer word and to translate the message in each word. Tie-in with Language Arts.
2. Have the student calculate the cost for using a computer for a day, week, month and a year.
3. Have the student calculate decimal number operations as they would be done in a computer. The student is to show how the final number would appear if it were displayed in a register on the computer panel, and how the final number would appear in a computer dump, and how the number would appear on a computer printout.

Materials:

1. Models of computer words for use by the students. Bulk copies may be printed by the Industrial Arts teacher.

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Communications and Media, Transocean Communication, MATHEMATICS

Materials -- Continued

2. IBM Computer Manual for Systems 7094 and 360.

Notes:

The students should visit a place such as the Goddard Space Flight Center to gain familiarity with the computer technical terms.

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Communications and Media, Transocean Communications

SCIENCE

Purpose: To inform the students that science has played the major role in the surge toward revolutionary changes in transocean communications.

Communications Satellite Systems consist of a series of orbiting satellites and a group of sending and receiving stations located around the earth. These satellites are used today to send television, radio, telephone, and other electronic communications across oceans and continents. Scientists and engineers have devised many ingenious satellites systems such as Telstar and Echo. These satellite systems are reliable and can handle a much wider range of frequencies than short wave radio.

Objectives: Upon completion of work in this unit, the student should be able to:

1. Draw a diagram of the atmosphere and describe the effect that the sun has upon each layer which allows transmission of radio waves.
2. Give brief definitions of the terms used in radio wave communication (e.g., short wave, ground wave, receiver, etc.).
3. Write a brief explanation of the behavior of radio waves.
4. State what is the most recent development in satellite communications.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Students and teachers will discuss the structure and characteristics of the atmosphere from the surface out to the auroras.
2. Students will make atmospheric charts showing the relative positions of the layers of the atmosphere and other characteristics of these layers.
3. Students and teacher will discuss the following terms as they relate to why radio can go around the world:

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Activities -- Continued

- | | |
|-------------------|------------------------------|
| a. radio wave | e. electrified layers of air |
| b. reflected wave | f. sky wave |
| c. receiver | g. fading |
| d. statron | |
4. Students and teacher will discuss the function of the positioned communications satellite.
 5. Students will make diagrams to show the relationship between two or more of the terms used.
 6. Students and teacher will discuss how solar energy is received by the earth. Define these terms:

a. albedo	c. absorption
b. insulation	d. reflection
 7. Field Trip: Students and teacher will visit a satellite communications center so that students can observe the recent developments in satellite communications.
 8. Student will summarize all new knowledge of the atmosphere and the communications satellite as artificial reflectors and amplifiers by taking a test; new vocabulary introduced in this unit should be included.

Materials:

1. Solar radiation chart
2. Posters for making charts
3. Test (to be constructed by teacher: See Activity 8)

SOCIAL STUDIES

Purpose: To point out the many employment opportunities for steady, year-round work in many different jobs in the telephone industry. Some of the jobs, such as telephone operator and file clerk, can be learned in a few weeks; others, such as installer and repairman, require longer to learn, but training is provided by the company upon employment.

Since the development of the telephone, continual advances have been made in equipment and use. The field of communications expands to meet the needs created by our modern way of life. Telephone communications meet the challenge and keep pace with expansion of the community. It takes people with skill to install and maintain sophisticated telephone equipment and to render the services necessary to provide modern tele-communications.

Objectives: Upon completion of work in this unit, the student should be able to:

1. State training, other qualifications for employment and advancement in the telephone industry.
2. Compare earnings and working conditions in the telephone industry with that of another industry.
3. Describe the nature of various jobs in the telephone company.
4. State the primary difference between professional and managerial occupations.
5. Describe new and projected developments in the telephone industry, for example, the picturephone.
6. Describe the "Hot Line".
7. Compare telephone service in the U.S. with that in an "underdeveloped" country.

Activities: To accomplish the objectives, the student may engage in activities such as:

1. Have the students work samples of employment tests and develop a list of qualifications for employment of and advancement.

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Activities --Continued

2. Have students describe each of the following special services that are provided by telephone companies in many areas:
 - a. Architects' and Builders' Service
 - b. Time of Day Information Service
 - c. Weather Forecasts
3. Have students prepare and present a short skit in which an interview for a job with the telephone company is demonstrated.
4. Field Trip: Teacher will arrange a visit to a local office of the telephone company and arrange in advance to obtain descriptive materials pertaining to various services and occupations.
5. Select five members of the class to research and serve on a panel to discuss the following topic:
"New and Projected Developments in the Telephone Industry"
6. Have students prepare a large wall chart that will compare at least three types of occupations in the telephone company.
7. Have students research "Hot Line" and report on the following:
 - a. Why it was founded
 - b. The volume of business
 - c. Degree of success
 - d. How messages go via cable and land lines to Moscow.
8. Using a map of the world, trace the "Hot Line" between the Pentagon, Washington, D.C. and the Kremlin in Moscow, U.S.S.R.
9. Have students list at least five types of information other than telephone numbers that can be obtained from the telephone directory.
10. Have students research and compare the following:
 - a. Earnings and working conditions in the telephone industry.
 - b. Earnings and working conditions in the postal system.

Activities -- Continued

11. Have students explain several ways in which the telephone plays a vital role in the work of:
 - a. Your local grocer
 - b. Your family doctor
 - c. Your local newspaper
12. Have students research telephone service in an "underdeveloped" country of their own choosing.

Materials:

1. Equipment
 - a. Maps (United States and World)
 - b. Poster board
 - c. Poster paints
2. Books
 - a. Griffin, Paul F. Map and Globe Activities for Children.
 - b. Colby, C. B. Communications.
 - c. Reed, Clinton A. Introduction to Business.
3. Pamphlets and Booklets from the Telephone Company
 - a. "How the Telephone Works"
 - b. "Careers with a Future in Tele-communication"
 - c. "The Telephone at Your Command"
 - d. "The Telephone in America"
 - e. "The Modern Telephone Operator"
4. Samples of employment tests.